IN THE CLAIMS:

1. (Previously presented) A four-stroke internal combustion engine, comprising:

an engine housing including a crankcase and a cylinder;

a cylinder head which at least partially defines a combustion chamber, said cylinder head disposed adjacent to said cylinder;

an intake valve and an exhaust valve disposed within said engine housing;

a crank chamber disposed within said crankcase;

an oil reservoir disposed within said crankcase, said oil reservoir being in fluid flow communication with said crank chamber;

a divider disposed within said crankcase, said divider at least partially dividing said crank chamber and said oil reservoir, said oil reservoir including first and second portions on opposite sides of said crank chamber; and

a path fluidly connecting said first and second portions, said path allowing lubricant from said oil reservoir to flow around a substantial portion of said divider and to equalized the amount of lubricant in said first and second portions when the engine is inverted.

2. (Original) An engine according to claim 1, wherein said divider includes an opening, such that said crank chamber and said oil reservoir are in fluid flow communication through said opening.

3. (Original) An engine according to claim 2, wherein said divider further includes a second opening and a third opening, said second opening positioned substantially across from said third opening, said second and third openings being located at predetermined distances from the first opening, such that said crank chamber and said oil reservoir are also in fluid flow communication through said second and third openings.

4. (Original) An engine according to claim 1, wherein said engine housing further includes a cylinder side wall which at least partially extends into said crank chamber to define a lubricant receiving space between said divider and said cylinder side wall.

5. (Original) An engine according to claim 1, wherein said engine housing further includes a valve chamber in which said intake valve and said exhaust valve are disposed, said valve chamber being in fluid flow communication with said crank chamber.

6. (Original) An engine according to claim 1, wherein said engine housing further includes a cylinder side wall which at least partially extends into said crank chamber, and a valve chamber in which said intake valve and said exhaust valve are disposed, said valve chamber being in fluid flow communication with said crank chamber and said cylinder side wall.

7. (Previously presented) An engine according to claim 1, further comprising:

a cantilevered crankshaft having opposite ends, said crankshaft being substantially located within said crank chamber; and

an agitator located at least partially within said crank chamber, said agitator moving lubricant within said engine housing during operation of said engine, wherein said agitator includes a counterweight which is interconnected with the cantilevered end of said crankshaft, said counterweight including a wing-tipped, aerodynamic side which reduces windage resistance on said crankshaft and which slings the lubricant about said crank chamber as said crankshaft rotates during operation of said engine.

8. (Previously presented) An engine according to claim 2, further comprising an agitator located at least partially within said crank chamber, said agitator moving lubricant within said engine housing during operation of said engine, wherein said divider further includes a scraper located adjacent to said opening, said scraper at least partially extending into said crank chamber, such that as said agitator rotates past said scraper during operation of said engine, said scraper meters the amount of lubricant which comes into contact with said agitator.

9. (Original) An engine according to claim 8, wherein an end of said scraper is located approximately within the range of .020 to .060 inches from said agitator when said agitator rotates past said scraper.

10. (Original) An engine according to claim 1, further comprising:

a cantilevered crankshaft substantially disposed within said crank chamber; and

a cam shaft rotatably driven by said crankshaft, said cam shaft being located substantially normal to said crankshaft.

11. (Original) An engine according to claim 10, further comprising:

a first valve tappet and a second valve tappet each tappet being associated with a respective valve, the valve tappets operatively engaging said cam shaft; and

wherein the valves are disposed substantially normal to said crankshaft.

12. (Original) An engine according to claim 10, wherein said cam shaft has an axial passageway and a radial aperture which communicates with said crank chamber and said passageway, and wherein said engine further comprises:

a breather tube having opposite ends, one end of said breather tube communicating with said passageway of said cam shaft and the other end of said breather tube communicating with an air intake system of said engine.

13. (Original) An engine according to claim 1, wherein said crankcase includes an access hole, and wherein said engine further comprises:

a cantilevered crankshaft substantially disposed within said crank chamber;

a piston reciprocally operable within said cylinder, said piston including an aperture;

a connecting rod having opposite ends, one end of said connecting rod being pivotally attached to said crankshaft, and the other end of said connecting rod being pivotally connected to said piston; and

a wrist pin which is received in said aperture of said piston, said wrist pin passing through one end of said connecting rod so as to pivotally connect said connecting rod to said piston, wherein said access hole in said crankcase is aligned with said aperture in said piston during installation of said wrist pin into said piston and through the respective end of said connecting rod.

14. (Original) An engine according to claim 1, wherein said engine housing further includes an internal cylinder side wall, and wherein said crank chamber includes at least two bearing pockets, one pocket having a larger diameter than the other, wherein both of said bearing pockets are disposed on the same side of said internal cylinder side wall.

15. (Previously presented) An engine according to claim 14, further comprising:

a cantilevered crankshaft having opposite ends, said crankshaft being substantially disposed within said crank chamber;

a first bearing positioned within one bearing pocket and a second bearing positioned in the other bearing pocket, the bearings supporting said crankshaft; and

an agitator located at least partially within said crank chamber, said agitator moving lubricant within said engine housing during operation of said engine, wherein said agitator includes a counterweight which is connected to the cantilevered end of said crankshaft, said counterweight having a locating hole extending therethrough, said counterweight being positioned adjacent to one of the bearings, such that a tool extending at least through said locating hole of said counterweight so as to be evenly positioned around the bearing adjacent to such counterweight for proper insertion of said crankshaft into said crank chamber.

16. (Original) An engine according to claim 1, wherein said engine housing further includes a cylindrical side wall which at least partially defines a piston bore, such that said combustion chamber partially covers said piston bore and such that each valve disposed within said engine housing is substantially parallel with said piston bore so that said combustion chamber extends over top portions of the valves, and wherein said engine further comprises:

a spark plug located within said cylinder head, said spark plug positioned such that an electrode of said spark plug is located closer to said exhaust valve than to said intake valve.

17. (Original) An engine according to claim 1, wherein said engine housing further includes an internal cylindrical side wall which defines a piston bore and which has a centerline traveling therethrough, and wherein said engine housing also includes additional walls defining draft angles, said draft angles enabling the engine housing to be easily separated from a die.

18. (Original) An engine according to claim 1, further comprising:

a cantilevered crankshaft having opposite ends, said crankshaft being substantially disposed in said crank chamber;

a crankshaft pin operably connected to said crankshaft; and

a starter mechanism coupled to said crankshaft pin.

19. (Original) An engine according to claim 1, wherein said divider defines a path which extends about said divider, such that the lubricant in said oil reservoir is able to flow around a substantial portion of said divider.

20. (Original) An engine according to claim 1, further comprising:

a shroud which at least partially surrounds said engine housing, said shroud including a pair of opposed channels; and

a fuel tank having opposed outwardly extending shoulders, such that said shoulders of said fuel tank are received by said respective channels of said shroud.

21. (Original) An engine according to claim 20, further comprising:

a filler material positioned between each of said channels of said shroud and each of said respective shoulders of said fuel tank.

22. (Original) An engine according to claim 21, wherein said filler material is a polyethylene, high-density, closed cell, high-temperature resistant foam which is also gasoline-resistant.

23. (Original) An engine according to claim 1, further comprising:

a fuel tank; and

a fuel line having opposite ends, one end of said fuel line being disposed within said fuel tank, said fuel line further having a fuel filter attached to the end of said fuel line disposed within said fuel tank.

24. (Original) An engine according to claim 1, wherein said engine housing further includes a back plate which is adjacent a flywheel, and wherein said crankcase, cylinder and back plate are cast as a single component.

25. (Original) An engine according to claim 24, wherein said cylinder includes at least one fin integrally formed thereto, said fin extending from said back plate and beneath said crankcase.

26. (Original) An engine according to claim 1, wherein said cylinder includes an intake port and an exhaust port, wherein said intake port and said exhaust port are located on opposite sides of said engine housing, wherein said intake valve and said exhaust valve are in communication with said intake port and said exhaust port, respectively, and wherein said intake port and said exhaust port each have an elliptical shape.

27. (Original) An engine according to claim 26, further comprising:

a shroud which at least partially surrounds said engine housing, said shroud having an opening around said intake port; and

an intake isolator having an air/fuel passageway therethrough, said intake isolator mounted to said engine housing such that said air/fuel passageway of said intake isolator is in alignment with said intake port, said intake isolator positioned within said opening in said shroud.

28. (Original) An engine according to claim 27, wherein said intake isolator includes an integrally formed back wall and side wall, wherein said back wall is adjacent said intake port and said side wall is substantially normal to said back wall.

29. (Original) An engine according to claim 27, further comprising:

a carburetor which is interconnected with said intake isolator.

30. (Original) An engine according to claim 26, further comprising:

a muffler connected to said engine housing, wherein said muffler includes a boss which extends into said exhaust port.

31. (Original) An engine according to claim 30, wherein said engine housing includes an angled, step sealing surface located in said exhaust port, such that an end of said boss of said muffler mates against said sealing surface of said exhaust port.

32. (Original) An engine according to claim 31, further comprising:

a sealing gasket located between said end of said boss and said sealing surface of said exhaust port.

33. (Original) An engine according to claim 30, wherein said boss of said muffler is surrounded by an outer portion of said exhaust port to define a clearance space between said muffler and said engine housing, and wherein said engine further comprises:

a gasket positioned between said engine housing and said muffler to seal said clearance space.

34. (Original) An engine according to claim 33, wherein said gasket is enlarged, and wherein the enlarged gasket provides a heat shield.

35. (Original) An engine according to claim 30, wherein said muffler includes a pair of outer shells having a pair of mounting bolt holes extending therethrough for receiving a pair of mounting bolts.

36. (Original) An engine according to claim 35, wherein said muffler includes an inner shell sandwiched between said pair of outer shells, said inner shell including a pair of mounting bolt holes extending therethrough for receiving the mounting bolts.

37. (Original) An engine according to claim 33, wherein one of the outer shells includes a shoulder extending around an edge of the outer shell, and the other outer shell includes a hook shaped flange extending around an edge of the outer shell, such that said hook shaped flange of the respective outer shell receives said shoulder of the respective outer shell.

38. (Original) An engine according to claim 1, further comprising:

a shroud which at least partially surrounds said engine housing, and wherein said shroud includes a plurality of raised portions on one side thereof.

39. (Original) A four-stroke internal combustion engine adapted for assembly on an assembly fixture, said engine comprising:

an engine housing including an integrally formed crankcase, cylinder and flywheel back plate, said flywheel back plate including a mounting boss on one side thereof such that a pin of the assembly fixture is received by said mounting boss; and

a shroud which at least partially surrounds said engine housing, said shroud including a slot therein, such that said slot surrounds the pin of the assembly fixture when said shroud is positioned around said engine, and such that the pin can be removed from said mounting boss after said shroud is attached to said engine, said engine being substantially completely assembled while said engine housing is mounted to the assembly fixture.

40. (Original) A four-stroke internal combustion engine, comprising:

an engine housing having an oversized wrist pin boss, said boss being machinable to include at least a first aperture in one location and a second aperture in another location;

a cantilevered crankshaft disposed within said engine housing;

a piston reciprocally operable within said engine housing, said piston including an aperture;

a connecting rod having opposite ends, one end of said connecting rod being pivotally attached to said crankshaft, and the other end of said connecting rod being pivotally connectable to said piston; and

a wrist pin which is passable through said first aperture in said boss into said aperture of said piston and into one end of said connecting rod to pivotally connect said connecting rod to said piston to provide a first throw of said engine, and which is also passable through said second aperture of said boss into said aperture of said piston and into one end of said connecting rod to pivotally connect said connecting rod to said piston to provide a second throw of said engine.

41. (Original) A four-stroke internal combustion engine comprising:

a crankshaft;

a blower housing having a hub which includes an extension, said hub adapted to fit over said crankshaft;

a starter assembly surrounded by said blower housing and positioned onto said hub extension, said starter assembly adapted to cooperate with said crankshaft to start the engine; and

an annular ring positioned over said extension to prevent axial movement of said starter assembly.

42. (Original) A method of assembling a four-stroke internal combustion engine, comprising the steps:

providing an engine housing having an integrally formed crankcase, cylinder and flywheel back plate;

providing a mounting boss on said back plate;

mounting said engine to an assembly fixture by positioning a pin on the fixture into said mounting boss;

placing a shroud around said engine housing while said engine remains mounted to said fixture; and

attaching said shroud to said engine housing while said engine remains mounted to the assembly fixture.

43. (Original) An engine according to claim 12, further comprising:

a check valve positioned between said cam shaft and said air intake system of said engine.

44. (Original) An engine according to claim 40, further comprising:

a star washer which is positioned adjacent to one end of said wrist pin and which is positioned in said aperture of said piston to prevent axial movement of said star washer.

45. (Original) An engine according to claim 39, wherein said flywheel back plate further includes a second mounting boss on an opposite side thereof, such that a second pin of the assembly fixture is received by said second mounting boss, and wherein said shroud further includes a second slot therein, such that said second slot surrounds the second pin of the assembly fixture when said shroud is positioned around said engine, and such that the second pin can be removed from said second mounting boss after said shroud is attached to said engine.

46. (Previously presented) A four-stroke internal combustion engine, comprising:

an engine housing including a crankcase and a cylinder;

a crank chamber disposed within said crankcase;

a crankshaft supported for rotation within said crank chamber;

a piston operably interconnected with said crankshaft for reciprocation within said cylinder in response to rotation of said crankshaft;

an oil reservoir disposed within said crankcase, and in fluid flow communication with said crank chamber;

an arcuate divider at least partially separating said crank chamber from said oil reservoir; and

a depending wall extending at least partially into said crank chamber to define a lubricant receiving space between said divider and said depending wall.

47. (Previously presented) An engine as set forth in claim 46, wherein said divider includes an opening, such that said crank chamber and said oil reservoir are in fluid flow communication through said opening.

48. (Previously presented) An engine as set forth in claim 47, wherein said divider further includes a second opening and a third opening, said second opening positioned substantially across from said third opening, said crank chamber and said oil reservoir being in fluid flow communication through said second and third openings.

49. (Previously presented) An engine as set forth in claim 46, wherein said depending wall is a cylinder side wall.

50. (Previously presented) An engine as set forth in claim 46, further comprising an intake valve and an exhaust valve disposed within the engine housing to the side of the cylinder, wherein said engine housing further includes a valve chamber in which said intake valve and said exhaust valve are disposed, said valve chamber being in fluid flow communication with said crank chamber.

51. (Previously presented) An engine according to claim 46, further comprising:

a cam shaft rotatably driven by said crankshaft and oriented substantially normal with respect to said crankshaft.

52. (Previously presented) An engine according to claim 51, further comprising first and second valve tappets associated with a respective valve and operatively engaging said cam shaft, wherein said valves are disposed substantially normal to said crankshaft.

53. (Previously presented) An engine according to claim 51, wherein said cam shaft has an axial passageway and a radial aperture communicating between said crank chamber and said passageway, said engine further comprising a breather tube having one end communicating with said passageway of said cam shaft and another end communicating with an air intake system of said engine.

54. (Previously presented) An engine according to claim 46, wherein said crankshaft is cantilevered, said crankcase includes an access hole, said piston includes an aperture, said access hole and aperture being alignable during assembly of said engine;

and wherein said engine further comprises:

a connecting rod having one end pivotally attached to said crankshaft and the other end pivotally connected to said piston; and

a wrist pin insertable through said access hole and into said aperture in said piston to pivotally connect said connecting rod to said piston.

55. (Previously presented) An engine according to claim 46, wherein said crank chamber includes at least two bearing pockets, one pocket having a larger diameter than the other and both pockets being disposed on the same side of said depending wall.

56. (Previously presented) An engine according to claim 46, further comprising a shroud at least partially surrounding said engine housing and including a pair of opposed channels, and a fuel tank having opposed outwardly-extending shoulders, such that said shoulders of said fuel tank are received by said respective channels of said shroud.

57. (Previously presented) An engine according to claim 46, wherein said engine housing further includes a back plate which is adjacent to a flywheel, and wherein said crankcase, cylinder, and back plate are cast as a single component.

58. (Previously presented) An engine according to claim 46, wherein said cylinder includes elliptical intake and exhaust ports on opposite sides of said engine housing, and intake and exhaust valves in communication with said intake and exhaust ports, respectively.

59. (Previously presented) An engine as set forth in claim 46, wherein the divider is substantially U-shaped.

60. (Previously presented) An engine as set forth in claim 59, wherein one side of the divider is exposed to the oil reservoir and an opposite side of the divider is exposed to the crank chamber.

61. (Previously presented) The engine of claim 46, wherein said cylinder defines a bore having a bore axis, and wherein said depending wall extends into said crank chamber generally parallel to said bore axis.

62. (Previously presented) The engine of claim 46, wherein said cylinder defines a bore, and wherein said depending wall defines an extension of said cylinder bore into said crank chamber.

63. (Previously presented) The engine of claim 62, wherein said bore extension and said cylinder bore have substantially the same diameter.

64. (Previously presented) The engine of claim 63, wherein said bore extension and said cylinder bore are substantially coaxial with each other.

65. (Previously presented) The engine of claim 46, further comprising a cylinder head mounted to said engine housing over said cylinder to at least partially define a combustion chamber in said cylinder, and intake and exhaust valves disposed within said engine housing.

66. (Previously presented) A four-stroke internal combustion engine, comprising:

an engine housing; including a crankcase and a cylinder;

a crankshaft supported for rotation within said crank chamber;

a wrist pin boss on said engine housing, said wrist pin boss being large enough to permit an access hole to be machined thereinto at one of at least two locations;

a piston reciprocally operable within said cylinder, said piston including an aperture, said access hole and aperture being alignable during assembly of said engine;

a connecting rod having one end pivotally attached to said crankshaft and the other end pivotally connected to said piston; and

a wrist pin insertable through said access hole and into said aperture in said piston to pivotally connect said connecting rod to said piston;

wherein the location of the access hole in the wrist pin boss is selected to accommodate a desired connecting rod length.

67. (Previously presented) A four-stroke engine capable of being operated in a tipped position, said engine comprising:

an engine housing, including a crankcase and a cylinder, said crankcase including a reservoir adapted to contain a lubricant;

a combustion chamber at least partially defined by said cylinder;

intake and exhaust valves communicating with said combustion chamber;

a piston reciprocal within said cylinder;

a crankshaft supported for rotation within said crank chamber and connected with said piston to convert linear movement of said piston into rotation of said crankshaft, said crankshaft supported by a bearing;

a cam shaft oriented normal to said crankshaft and rotatable in response to rotation of said crankshaft to actuate said valves; and

a crank chamber disposed within said crankcase, wherein said cam shaft has an axial passageway and a radial aperture which communicates with said crank chamber and said passageway, the cam shaft receiving lubricant from the reservoir through said bearing.

68. (Previously presented) A four-stroke internal combustion engine, comprising:

an engine housing, including a crankcase and a cylinder;

a crank chamber disposed within said crankcase; and

a cantilevered crankshaft supported for rotation within said crank chamber, said crankshaft including a counterweight having a locating hole extending therethrough to accommodate a tool for proper insertion of said crankshaft into said crank chamber.

69. (Previously presented) The engine of claim 68, further comprising an internal cylinder side wall, and wherein said crank chamber includes at least two bearing pockets, one pocket having a larger diameter than the other, wherein both of said bearing pockets are disposed on the same side of said internal cylinder side wall.

70. (Previously presented) A four-stroke internal combustion engine, comprising:

an engine housing, including a crankcase and a cylinder;

a crank chamber disposed within said crankcase;

a crankshaft supported for rotation within said crank chamber;

a piston operably interconnected with said crankshaft for reciprocation within said cylinder in response to rotation of said crankshaft;

a shroud at least partially surrounding said engine housing and including a pair of opposed channels; and

a fuel tank having opposed outwardly-extending shoulders, such that said shoulders of said fuel tank are received by said respective channels of said shroud.

71. (Previously presented) The engine of claim 70, further comprising:

an oil reservoir, disposed within said crankcase and in fluid flow communication with said crank chamber;

a divider at least partially separating said crank chamber from said oil reservoir; and

a depending wall extending at least partially into said crank chamber to define a lubricant receiving space between said divider and said depending wall.

72. (Previously presented) The engine of claim 70, further comprising a filler material positioned between each of said channels and said shroud and each of said respective shoulders of said fuel tank.

73. (Previously presented) The engine of claim 72, wherein said filler material is a polyethylene, high-density, closed cell, high-temperature resistant foam which is also gasoline-resistant.

74. (Previously presented) A four-stroke internal combustion engine, comprising:

an engine housing including a crankcase, a cylinder, and a back plate;

a flywheel adjacent to said back plate;

a crank chamber disposed within said crankcase;

a crankshaft supported for rotation within said crank chamber; and

a piston operably interconnected with said crankshaft for reciprocation within said cylinder in response to rotation of said crankshaft;

wherein said crankcase, cylinder, and back plate are cast as a single component.

75. (Previously presented) The engine of claim 74, further comprising:

an oil reservoir disposed within said crankcase, and in fluid flow communication with said crank chamber;

a divider at least partially separating said crank chamber from said oil reservoir; and

a depending wall extending at least partially into said crank chamber to define a lubricant receiving space between said divider and said depending wall.

76. (Previously presented) The engine of claim 75, wherein said cylinder includes at least one fin integrally formed therewith, said fin extending from said back plate and beneath said crankcase.

77. (Previously presented) An L-head, internal combustion engine, comprising:

an engine housing including a crankcase and a cylinder, said cylinder including intake and exhaust ports on opposite sides of said engine housing, the intake and exhaust ports being elliptical in a cross-section taken perpendicular to the longitudinal axis of each respective port;

intake and exhaust valves in communication with said intake and exhaust ports, respectively;

a crank chamber disposed within said crankcase;

a crankshaft supported for rotation within said crank chamber; and

a piston operably interconnected with said crankshaft for reciprocation within said cylinder in response to rotation of said crankshaft.

78. (Previously presented) The engine of claim 77, further comprising:

an oil reservoir disposed within said crankcase, and in fluid flow communication with said crank chamber;

a divider at least partially separating said crank chamber from said oil reservoir; and

a depending wall extending at least partially into said crank chamber to define a lubricant receiving space between said divider and said depending wall.

79. (Previously presented) The engine of claim 77, further comprising:

a shroud which at least partially surrounds said engine housing, said shroud having an opening around said intake port; and

an intake isolator having an air/fuel passageway therethrough, said intake isolator mounted to said engine housing such that said air/fuel passageway of said intake isolator is in alignment with said intake port, said intake isolator positioned within said opening in said shroud.

80. (Previously presented) The engine of claim 77, wherein said intake isolator includes an integrally-formed back wall and side wall, wherein said back wall is adjacent said intake port and said side wall is substantially normal to said back wall.

81. (Previously presented) The engine of claim 77, further comprising a carburetor which is interconnected with said intake isolator.

82. (Previously presented) The engine of claim 77, further comprising a muffler connected to said engine housing, wherein said muffler includes a boss which extends into said exhaust port.

83. (Previously presented) The engine of claim 82, wherein said engine housing includes an angled, step sealing surface located in said exhaust port, such that an end of said boss of said muffler mates against said sealing surface of said exhaust port.

84. (Previously presented) The engine of claim 83, further comprising a sealing gasket located between said end of said boss and said sealing surface of said exhaust port.

85. (Previously presented) The engine of claim 82, wherein said boss of said muffler is surrounded by an outer portion of said exhaust port to define a clearance space between said muffler and said engine housing, and wherein said engine further comprises a gasket positioned between said engine housing and said muffler to seal said clearance space.

86. (Previously presented) The engine of claim 85, wherein said gasket is enlarged and provides a heat shield.

87. (Previously presented) The engine of claim 82, wherein said muffler includes a pair of outer shells having a pair of mounting bolt holes extending therethrough for receiving a pair of mounting bolts.

88. (Previously presented) The engine of claim 87, wherein said muffler includes an inner shell sandwiched between said pair of outer shells, said inner shells including a pair of mounting bolt holes extending therethrough for receiving the mounting bolts.

89. (Previously presented) The engine of claim 85, wherein one of the outer shells includes a shoulder extending around an edge of the outer shell, and the other outer shell includes a hook shaped flange extending around an edge of the outer shell, such that said hook shaped flange of the respective outer shell receives said shoulder of the respective outer shell.

90-91. (Cancelled)

92. (Previously presented) The engine of claim 67, wherein said crankshaft includes a worm-helical gear.

93. (Previously presented) The engine of claim 92, wherein said cam shaft includes a worm-helical gear, and wherein said worm-helical gear of said crankshaft meshes with said worm-helical gear of said cam shaft during operation of the engine.

94. (Previously presented) The engine of claim 93, wherein said radial aperture extends through said worm-helical gear of said cam shaft.

95. (Previously presented) The engine of claim 94, wherein said engine housing includes a valve chamber and an aperture which communicates with said valve chamber and said crank chamber, said aperture being positioned adjacent to said worm-helical gear of said cam shaft such that rotation of said worm-helical gear of said cam shaft directs lubricant through said aperture and into said valve chamber.

96. (Previously presented) The engine of claim 68, wherein said crankshaft includes a first end and a second end, said first end including said counterweight, and wherein said engine further comprises a first bearing positioned on said crankshaft adjacent said counterweight, a second bearing positioned on said crankshaft near said second end; a gear positioned on said crankshaft between said first and second bearings, and a cam shaft supported for rotation by said engine housing, said cam shaft including a gear in mating engagement with said gear of said crankshaft.